Geometry Unit 4 – Worksheet 3

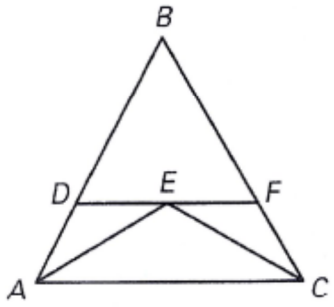
Name: _____

Isosceles and Equilateral Triangles

Date: _____ Per: _____

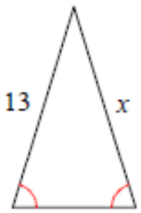
In Exercises 1–4, use the diagram. Copy and complete the statement. Tell what theorem or corollary you used.

1. If $\overline{AE} \cong \overline{CE}$, then $\angle$? $\cong \angle$?.
2. If $\angle DAE \cong \angle DEA$, then ? $\cong$?.
3. If $\angle BDF \cong \angle DBF \cong \angle BFD$, then ? $\cong$? $\cong$?.
4. If $\overline{AB} \cong \overline{BC} \cong \overline{AC}$, then $\angle$? $\cong \angle$? $\cong \angle$?.



Find the value of x.

1)



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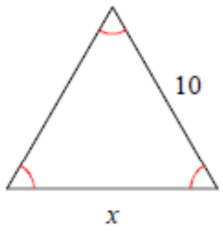

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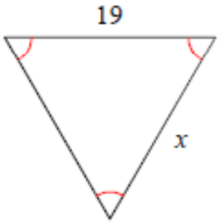

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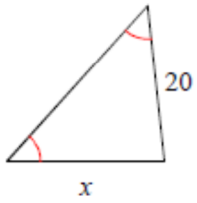

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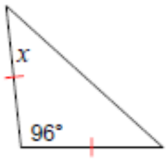

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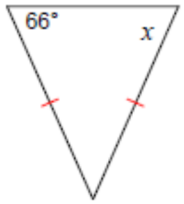

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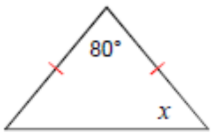
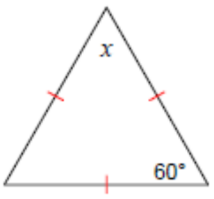


8)



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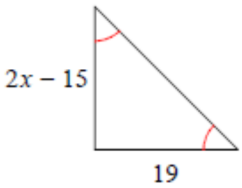

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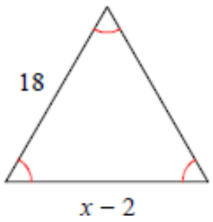
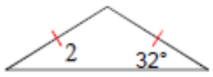
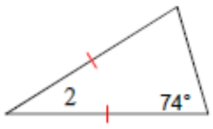


13) $m\angle 2 = 2 + 3x$

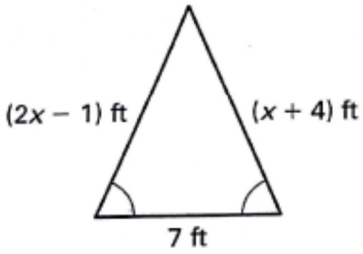


14) $m\angle 2 = 2x + 6$



Find the perimeter of the triangle.

17.



19.